

DESCRIPTIONS OF SOME NEW ALOES FROM THE
TRANSSVAAL.

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(With Plates V.-XV.)

Burt-Davy* in his First Check-List of the Flowering Plants and Ferns of the Transvaal and Swaziland, published in May, 1912, records some seventeen species of *Aloe* from the above regions. Of these only five species, namely, *A. castanea*, *A. cinnabarina*, *A. Dyeri*, *A. Peglerae*, and *A. transvaalensis* may be looked upon as peculiar to the Transvaal; the rest have a fairly wide distribution throughout South Africa.

Of the former, *A. cinnabarina*, Diels, which is only recorded from the Transvaal† is at present unknown to me, while of the latter it is very doubtful whether *A. lineata*, Haw., occurs in the Transvaal or Swaziland, for plants which have been mistaken for this species from these regions prove to be entirely different, and are described in the present paper as *Aloe Pretoriensis*.

ALOE LONGIBRACTEATA, spec. nov.

Transvaal.

(Plate V.)

Aloe longibracteata, Pole Evans; species nova affinis *A. affinis*, Berg., sed foliis copiose maculatis triangulariis et erectis, longissimis bracteis differt.

Herba succulenta, acaulis. Folia 21-33 dense rosulata, valde patentia, apice frequenter sicca et recurvata, triangulari-lanceolata, 9-20 cm. longa et 9-11 cm. lata, carnosissima, supra subcanaliculata, obscure viridia vel rubescentia, striata maculisque magnis albidis oblongis saepe

* *Annals of the Transvaal Museum*, May, 1912, pp. 134-5.

† A. Berger in "Engl. Pflanzenreich. Liliac. Asphodel-Aloin," p. 271.

confluentibus et irregulariter transverse fasciation seriatis picta, subtus convexa, pallide glauco-viridia immaculata, ad margines sinuato-dentata et linea distincte cartilaginea cincta, dentibus corneis deltoideis apice brunneis validis 6-7 mm. longis et ca. 9-12 mm. inter se distantibus armata.

Inflorescentia ca. 80 cm. alta, scapus infra medium ramosus, ramis 2-3 erectis ad basim bracteis ca. 10-11 cm. longis suffultis; racemi elongatis, densi, 25-30 cm. longi; bracteae lanceolato-lineares, subulato-acuminatae 45-47 mm. longae; pedicelli 15-17 mm. longi, flaviusculi.

Perianthium rubicundum, 40 mm. longum, basi manifeste globoso-inflatum et 9 mm. diam., supra ovarium distincte constrictum, levissime decurvatum et faucem versus ampliatus; segmenta oblonga et libera per 15-17 mm.; genitalia brevissime exserta.

Capsula oblongo-cylindracea, subtrigona, 23-27 mm. longa et 13-16 mm. diam., grisea; pedicelli fructiferi 25-27 mm. longi, erecti; semina oblonga, triquetra, anguste alata, griseo-brunnea, 5 mm. longa.

This plant was collected by myself near Lydenberg in the Transvaal in May, 1914. It occurs in open grass country at an altitude of 5,000-6,000 ft., and flowers from June to July.

It is characterized by its robust spreading leaves, dichotomously branched inflorescence, erect racemes, and extremely long bracts. The bracts at the base of the branches are remarkable in that they attain a length of 10-11 cm. Those in the lower portion of the racemes are from 45-47 mm. long while those in the upper portion measure 25 mm.

The flowers are a rich strawberry-pink (R.C.S.).*

This *Aloe* would appear to be closely related to *A. affinis*, Berg., which also occurs in the same locality, but it differs from it in possessing shorter and more triangular leaves which are conspicuously spotted. Moreover, the leaves of *A. affinis* are distinctly erect, whereas those of *A. longibracteata* are almost always horizontal. The inflorescence usually bears 2 or 3 erect branches which spring from below the middle of the peduncle, while those of *A. affinis* arise well above the middle.

The brightly coloured racemes make it a distinct and attractive ornamental plant.

Description.—*Herb* succulent, stemless. Leaves 21-33 in a dense rosette, spreading, frequently withered at the apex and recurved, triangular-lanceolate, 9-20 cm. long and 9-11 cm. broad, very fleshy, channelled above, convex below, upper surface dark green or reddish with numerous pale green to whitish stripes or spots, which are irregu-

* **N.B.**—(R.C.S.) refers in all cases to colours taken from Ridgway's "Color Standards and Color Nomenclature," Washington, 1912.

larly interrupted and by which irregular transverse bands are produced, lower surface light green or glaucous, indistinctly lineate, margins wavy with a distinct brown cartilaginous border, and beset with short deltoid horny teeth which are 9–12 mm. apart, brown, and 6–7 mm. long.

Inflorescence about 80 cm. high, branched below the middle, branches 2–3, erect, subtended at the base by bracts 10–11 cm. long, racemes elongated, densely flowered, 25–30 cm. long; bracts 45–47 mm. long, lanceolate-linear, subulate-acuminate; pedicels 15–17 mm. long, rather yellowish.

Perianth strawberry-pink (R.C.S.), 40 mm. long, distinctly inflated at the base and 9 mm. diam., then clearly constricted above the ovary, very slightly decurved and swollen towards the mouth, lobes long and free for 15–17 mm., paler in colour at the margins, yellowish inside.

Style and stamens very slightly exerted.

Capsule oblong-cylindrical, 3-angled, 23–27 mm. long and 13–16 mm. diam., greyish; pedicels 25–27 mm. long, erect.

Seeds oblong, 3-winged, wings narrow, greyish-brown, 5 mm. long.

ALOE PIENAARII, spec. nov.

Transvaal.

(Plates VI. and VII.)

Aloe Pienarii, Pole Evans; species nova, *A. abyssinica*, Lam., simillima, et certe ad sectionem hanc spectat, sed bracteae multo maiores, distincte cuspidatae, et perianthium non basi stipitatum.

Herba succulenta acaulis. *Folia* 35–60, dense rosulata, erecta, leviter apice recurvata, lanceolata-ensiformia, laete rufo-viridia vel caerulea, 60–80 cm. longa et basi 12–15 cm. lata, ad margines aculeis parvis deltoideis castaneis 2 mm. longis et 5–7 mm. inter se distantibus armata.

Inflorescentiae 2–3 ex eadem rosula, copiose paniculata-ramosae, erectae, 1.25–1.65 m. altae, ramis ca. 8 arcuato-erectibus basi bractea deltoideo-acuminata suffultis; racemi cylindrico-conici, densiflori, circ. 25–35 cm. longi, floribus primum coccineis apice viridulis, deinde expansis lutescentibus; bracteae initio dense imbricatae deinde pedicellos amplectentes, late ovato-acuminatae, plurinervae, 20 mm. longae et 11 mm. latae; pedicelli erecto-patentes, 15–20 mm. longi, viridio-coccini.

Perianthium 35–38 mm. longum, subtrigona-cylindraceum, segmenta exteriora vix tubo breviora, libera, acuta, interiora obtusiora, leviter apice recurva, lateralia conniventia faucem angustam erectam formantia; genitalia vix exserta.

Capsula perianthio sicco involuta, cylindraceo-trigono, lignosa, 20 mm. longa; semina fusca, irregularia, anguste alata, 4–5 mm. longa.

This Aloe was collected by Mr. P. J. Pienaar at Smit's Drift in the neighbourhood of Pietersburg, Transvaal, in January, 1914. A number of plants were obtained for the Union Buildings' grounds, and they flowered profusely from May to July. This species is found most commonly on and around the isolated granite kopjes of the Pietersburg district. It also occurs in the open flat country.

It rather resembles *A. abyssinica* in habit and general appearance, and must, I think, be referred to Berger's *Tropicales*, although the bracts are much larger than those which are found in this group, in fact the bracts at the tips of the racemes are one of the most conspicuous features of the inflorescence.

The unopened flowers are scarlet (R.C.S.) tipped with green. As soon as the stamens are exerted, the colour of the perianth changes from scarlet to citron-yellow from the apex downwards; the base of the perianth, however, usually retains its scarlet hue.

It makes a very showy and attractive plant and remains in flower from 2-3 months.

Description.—*Herb* succulent, stemless. *Leaves* 35-60 in a dense rosette, erect, slightly recurved towards the apex, lanceolate-ensiform, reddish green or bluish, 60-80 cm. long and 12-15 cm. broad at the base, beset along the margins with small chestnut-coloured deltoid thorns 2 mm. long and 5-7 mm. apart.

Inflorescences 2-3 from the same rosette, copiously paniced, erect, 1.25-1.65 metres high, with about 8 arcuate-erect branches subtended at the base with deltoid-acuminate bracts; racemes cylindrical-conical, densely flowered, about 25-35 cm. long, flowers at first scarlet greenish at the tips, becoming yellow when open; bracts at first densely imbricate afterwards embracing the pedicels, broadly ovate-acuminate, many-veined, 20 mm. long and 11 mm. broad; pedicels erect-spreading, 15-20 mm. long, greenish scarlet.

Perianth at first scarlet (R.C.S.) tipped with green, later changing to a citron-yellow (R.C.S.) 35-38 mm. long, somewhat 3-angled and cylindrical, outer segments shorter than the inner, free, acute, inner segments more obtuse, slightly recurved at the apex, the two lateral ones becoming compressed towards the apex so as to close the mouth of the tube.

Style and stamens just exerted, anthers grenadine red (R.C.S.) at first, flame scarlet (R.C.S.) when open, style and filaments bright chalcedony yellow (R.C.S.), filaments flattened and wing-like 2-2½ mm. broad.

Capsule enveloped with the dry perianth, cylindrical-trigonus, woody, 20 mm. long; seeds darkish, irregular, narrowly winged, 4-5 mm. long.

ALOE WICKENSII, spec. nov.

Transvaal.

(Plates VIII. and IX.)

Aloe Wickensii, Pole Evans; species nova, distincta et pulcherrima, *A. Pienaarii* valde affinis, sed inflorescentiae rami magis patentes et pauciores multo sunt; flores etiam distincte cylindrico-carinati.

Herba succulenta, acaulis. *Folia* 40-50, dense rosulata lanceolata-ensiformia, erecta, sensim incurvata pallide glauco-viridia, 50-70 cm. longa et basi 10-13 cm. lata, planiuscula, subtus convexa, ad margines aculeis parvis circ. 2 mm. longis deltoideis atris 6-8 mm. inter se distantibus armata.

Inflorescentiae saepe 2-4 ex eadem rosula, patentes; scapus lateraliter, compressus, nudus, plerumque ramis 2 lateralibus instructus; rami arcuato-erecti, sursum bracteis pallide brunneis scariosis laete ovato-acuminatis muniti; racemi densiflori, conico-cylindrici, 17-20 cm. longi; bracteae laete ovato-cuspidatae, 20 mm. longae et 13 mm. latae; pedicelli erecto-penduli, 28-32 mm. longi, viridis.

Flores juniores clausi primo laete rubri, deinde viridio-lutei, demum expansis luteis.

Perianthium cylindrico-carinatum, 35 mm. longum; segmentis exterioribus liberis, 2 superis apice recurvis et breviores ceteris, interioribus apice rufo-brunneis; genitalia demum paullo exserta.

Capsula perianthio sicco involuto, oblonga-cylindracea, subtrigona, 20 mm. longa; semina irregularia anguste alata, fusca, 4-5 mm. longa.

This is one of the handsomest Aloes known to me. It was collected by Messrs. Wickens and Pienaar in M'Phathlele's Location in the Northern Transvaal, in January, 1914.

Specimens were brought to Pretoria and the plants flowered in July, 1914.

In general appearance and habit of growth this *Aloe* closely resembles *A. Pienaarii* from the same locality, but it is more commonly found on gentle slopes in bush country, although it may frequently occur in open ground along with *A. Pienaarii*.

When the plants are not in flower, those of *A. Wickensii* can be distinguished from *A. Pienaarii* by their paler green leaves which are distinctly incurved.

The inflorescence differs markedly from that of *A. Pienaarii*. It is much less branched and much more open. As a rule there are not more than two lateral branches, whereas in *A. Pienaarii* there are usually about eight, some of which may again be branched. The racemes also are shorter and more conical than in *A. Pienaarii*. The

flower-buds are at first morocco-red (R.C.S.), they then turn a dull green-yellow (R.C.S.) and finally the open flowers become a bright lemon chrome (R.C.S.). The perianth differs from *A. Pienaarii* in being distinctly carinate; it is about 7 mm. diam. towards the base and 13 mm. diam. at the widest portion.

Description.—*Herb* succulent, stemless.

Leaves 40–50 in a dense rosette, lanceolate-ensiform, erect, distinctly incurved, pale glaucous green 50–70 cm. long and 10–13 cm. at the base, rather flat, convex below, beset at the margins with small deltoid thorns about 2 mm. long, black, and about 6–8 mm. apart.

Inflorescences often 2–4 from the same rosette, spreading; scape laterally compressed, naked, with usually two lateral branches; branches arcuate-erect, clothed with pale brown scariose broadly ovate-acuminate bracts; racemes densely flowered, conical cylindrical, 17–20 cm. long; bracts and tinged with red towards the base; the young buds distinctly globular; bracts scariose, pellucidate, 5–6 mm. long, ovate-cuspidate, reflexed; pedicels recurved 3–4 mm. long.

Perianth 35 mm. long, cylindrical-ventricose, very shortly stipitate; outer segments free for 15–17 mm., obtuse, recurved at the apex, 3–5-nerved; inner segments obtuse, recurved, tipped with auburn (R.C.S.), with 3 green nerves. *Stamens* projecting 11 mm. beyond the perianth and slightly recurved, the exposed portion of the filaments chestnut-brown to black; anthers mars orange (R.C.S.).

Style stout, strongly recurved, pale sulphur-yellow (R.C.S.).

Capsule shortly stipitate, oblong-ovoid, 25 mm. long and 13 mm. broad.

ALOE GLOBULIGEMMA, spec. nov.

Transvaal.

(Plates X. and XI.)

Aloe globuligemma, Pole Evans; species unica, certe ad sectionem *Pleurostachyarum* pertinet et affinis est *A. secundiflorae*, Engl., sed differt acaulescente et globuligemma.

Herba succulenta, acaulis. *Folia* 16–23 dense rosulata erecto-patula, lanceolato-ensiformia sensim attenuata, apice recurvata, glauca, immaculata, basi planiuscula superne canaliculata, 45–50 cm. longa et basi 8–9 cm. lata, ad margines linea tenui cartilaginea cincta dentibusque parvis deltoideis instructa, pallidis brunneis $1\frac{1}{2}$ –2 mm. longis et ca. 8–9 mm. inter se distantes. *Inflorescentia* valde ramosa, circ. 60 cm.–1 m. alta; pedunculus robustus, glaucus, nudus; rami 5–7 horizontaliter-oblique patentem, basi bracteis parvis deltoideo-acutis vacuis muniti; racemi

densiflori 22-40 cm. longi; flores secundi, omnessursum spectantes versus centrum inflorescentiae simulae leviter deflexi, junioribus clausis rubris, expansis sulphureis basi rubro-tinctis; juniores gemmae distincte globulae; bracteae scariosae, pelludidae, 5-6 mm. longae, ovato-cuspidatae, reflexae; pedicelli recurvi, 3-4 mm. longi.

Perianthium, 25 mm. longus, cylindrico-ventricosum, brevissime stipitatum; segmenta exteriora 15-17 mm. longa, obtusa, apice leviter recurvata, 3-5 nervia; interiora apice fusca, trinervia.

Filamenta per 11 mm. exserta et leviter recurvata. *Stylus* valida et valde arcuato-recurvatus.

Capsula breviter stipitata, oblonga-ovoidea, 25 mm. longa et 13 mm. lata.

This remarkable Aloe was collected by Messrs. Wickens and Pienaar in M'Phathlele's Location in January, 1914.

Specimens brought to Pretoria flowered towards the end of July and during August of this year.

The plant occurs in vast numbers in a very gregarious manner in open sandy stretches. It is not uncommon to find long, continuous belts of thickly crowded plants extending for two to three hundred yards in length.

In the early stages of development the racemes are conspicuously furnished with widely separated spherical to globular flower-buds which develop with considerable slowness. The unopened flowers are a rich nopal red (R.C.S.) tinged with green at the tips; as soon as they open the flowers become a sulphur-yellow (R.C.S.).

I think this *Aloe* must be referred to Berger's *Pleurostachyae*, and it would appear to show some relationships with *A. secundiflora*, Engl.

Description.—*Herb* succulent, stemless.

Leaves 16-23 in a dense rosette, erect-spreading, lanceolate-ensiform, distinctly attenuated, recurved at the apex, glaucous, unspotted, somewhat flar at the base canaliculate above, 45-50 cm. long, and 8-9 cm. broad at the base; margins cartilaginous, wavy and toothed; teeth standing out at right angles to the margins, deltoid, recurved, pale brown, $1\frac{1}{2}$ -2 mm. long and about 8-9 mm. apart.

Inflorescence very branched, about 60 cm.-1 metre high; peduncle stout, glaucous, naked; branches 5-7 spreading horizontally to obliquely, with a few small deltoid-acute empty bracts at the base; racemes densely flowered 22-40 cm. long; flowers secund, all pointing upwards the centre of the inflorescence and at the same time slightly deflexed, unopened flowers nopal red (R.C.S.), green at the tips, sulphur-yellow (R.C.S.) when expanded and tinged with red towards the base; the young

buds distinctly globular; bracts scarious, pellucidate, 5-6 mm. long, ovate-cuspidate, reflexed; pedicels recurved 3-4 mm. long.

Perianth 25 mm. long, cylindrical-ventricose, very shortly stipitate; outer segments free for 15-17 mm., obtuse, recurved at the apex, 3-5-nerved; inner segments obtuse, recurved, tipped with auburn (R.C.S.); with three green nerves. *Stamens* projecting 11 mm. beyond the perianth and slightly recurved, the exposed portion of the filaments chestnut-brown to black; anthers mars orange (R.C.S.).

Style stout, strongly recurved, pale sulphur-yellow (R.C.S.).

Capsule shortly stipitate, oblong-ovoid, 25 mm. long and 13 mm. broad.

ALOE PRETORIENSIS.

Transvaal.

(Plates XII. and XIII.)

Aloe Pretoriensis, Pole Evans, in Gard. Chron., 1914, vol. lvi., pp. 105-6; affinis *A. arborescentis*, Mill., sed non frutescente, foliis multo rigidioribus et inflorescentia altissima copiose ramosa differt.

Truncus simplex, brevis, interdum 1 m. altus, 8-12 cm. diam.

Folia numerosa, 30-60 dense rosulata, arcuato-erecta, 30-65 cm. longa et basi 3-7 cm. lata, 8-10 mm. crassa, lanceolata et sensim acuminata, supra planiscula leviter canaliculata versus apicem, subtus convexa, pallida viridia vel glauca, ad margines pungentibus corneis aculeisque deltoideis apice curvatus, rubris, 3-4 mm. longis et circa 10-17 mm. distantibus instructa.

Inflorescentiae circa 2-3.5 m. altae; scapus validus, basi nudus, plerumque ramos 2-8 emittens, rami erecto-patentes, basi deltoideo-ovatis bracteis suffulti; racemi conico-cylindracei, 15-50 cm. longi, densi, laxius floribus pendulibus; bracteae ovato-deltoideae, plurinerviae, 15-20 mm. longae et 10-12 mm. latae; pedicelli 20-25 mm. longi.

Perianthium cylindraceum, medio paulum ampliatus et versus faucem leviter compressum, laete rubrum, 40-43 mm. longum, segmenta libera, apice viridio-luteola; filamenta stylusque breviter exserta, viridio-luteola, antherae rubro-brunneae.

Capsula perianthio sicco involuta, cylindracea, subtrigona, 15-18 mm. longa et circa 6 mm. lata, grisea; pedicelli fructiferi 25-30 mm. longi, erecti; semina parva, angustissime triquetra fusca, 2-4 mm. longa.

Although this plant does not possess the shrubby or arborescent habit of Berger's *Arborescentes*, the characters of the inflorescence and flowers plentifully show that its relationships lie with *Aloe pluridens* and *A. arborescens*.

The stem is very rarely branched and seldom exceeds a foot or two in height. It is usually covered with the dried or charred remains of the old leaf bases.

The leaves are stiffer than those of *A. pluridens* or *A. arborescens*, and lack their falcate character. The reddish thorns which beset the margins of the leaves are also more robust and pungent than those which occur in *A. pluridens* or *A. arborescens*.

The tall branched inflorescence forms the most striking feature of the plant, and when one compares it with that of *A. lineata*, which is unbranched and differs in many other important respects, it seems almost incredible that *A. Pretoriensis* should have been mistaken by so many botanists for *A. lineata*, as has been done.

This handsome plant occurs on the northern slopes of the hills around Pretoria, and is especially abundant on Meintjes Kop, where and when in bloom it attracts large numbers of brightly coloured sun-birds. It is also found near Lydenberg, at Barberton, and along the foot of the Lebombo range of mountains.

It usually flowers in May.

Description.—*Stem* short, sometimes reaching 1 metre in length and 8-12 cm. in diam.

Leaves numerous 30-60 in a dense rosette, arcuate-erect, 30-65 cm. long, 3-7 cm. broad at the base, 8-10 mm. thick, lanceolate and distinctly acuminate, flat above, slightly canaliculate towards the tip, convex below, light green or slightly glaucous armed along the margin with sharply pointed red, horny prickles, which are 3-4 mm. long and 10-17 mm. apart. Tips of most of the older leaves withered and reddish in colour.

Inflorescence 2-3·5 metres long; peduncle stout and branched, from 2-8 branches, erect-patent, subtended by deltoid-ovate bracts at the base; racemes conical-cylindrical 15-50 cm. long, dense, with loosely pendulous flowers, floral bracts ovate-deltoid, many-veined, at first densely imbricate, 15-20 mm. long and 10-12 mm. broad; pedicels 20-25 mm. long.

Perianthium cylindricum, slightly swollen towards the middle and tapering towards the tip, rich peach red, 40-43 mm. long, segments free, yellowish green at the tips.

Anthers and style shortly exserted, filaments and style greenish yellow, anthers reddish brown.

Capsule enwrapped with the dry perianth, cylindrical, 3-angled, 15-18 mm. long and about 6 mm. broad, greyish; fruit-bearing pedicels 25-30 mm. long, erect.

Seeds small, very narrowly 3-winged, dark, 2-4 mm. long.

ALOE ACULEATA.

Transvaal.

(Plates XIV. and XV.)

Aloe aculeata, Pole Evans; species distincta et nobilissima. *A. rubroviolaceum*, Schweinfurth, valde accedit, sed caulis multo brevior, folia aculeata, bracteae parviores et breviores.

Caulis plerumque brevis, robustus, interdum 1·00 m. altus, simplex. *Folia* numerosa, dense rosulata, erecto-incurvata, lanceolata-ensiformia, sensim attenuata apice corneo pungente, 45–60 cm. longa et basi 7·5–11 cm. lata, 15–17 mm. crassa, ad margines aculeis cornicis rubro-brunneis 10–20 mm. remotis armata, supra concaviuscula, apicem versus subcanaliculata et paucibus dentibus similibus ubique spinoso-tuberculata.

Pedunculus validus, simplex vel furcatus, lateraliter compressus, superne numerosis bracteis vacuis deltoideis latis vestibus, plerumque 2–3 ramis, arcuato-erectis; racemi 30–60 cm. longi et ca. 7 cm. lati, multiflori, densi, floribus primum laeta luteo-coccinis, deinde expansis lutescentibus; bracteae rubro-brunneae, deltoides-acutae 11 mm. longae et 7–8 latae; pedicelli 3 mm. longi.

Perianthium 34–38 mm. longum, citro-luteum, ventricosum-cylindraceum; segmenta exteriora basi per 14–16 mm. connata, lineari-lanceolata, trinervia, interiora latiora et vix obtusiora apice brunneae. *Filamenta* robusta, per 15 mm. exserta brunnea. *Stylus* longius flavidus.

Capsula cylindraceo-trigona, 14–18 mm. longa et 8–10 mm. diam., grisea; semina triquetra, anguste alata, fusca, 4 mm. longa.

This handsome *Aloe* undoubtedly belongs to Berger's *Principales*, and the characters of the inflorescence and flowers suggest a close relationship with *A. rubroviolacea*, Schweinfurth, although the bracts are much smaller and shorter than in *A. rubroviolacea*.

This *Aloe* was collected by Messrs. Pienaar and Wickens in the Zoutpansberg in the Northern Transvaal in January, 1914, and specimens which were brought to Pretoria flowered the following May.

The plants occur in open bush veld country, and when in flower form a very attractive feature of the vegetation. The upper part of the racemes with unopened flowers is a bright orange-scarlet, while the open flowers lower down are a bright lemon-yellow.

Sometimes the peduncle is unbranched, especially in the younger plants, but more commonly there are from 1–3 upright branches, in some cases as many as five branches.

When in flower it makes a very handsome ornamental plant.

Description.—*Stem* usually short, sometimes as much as 1 metre in height, unbranched.

Leaves numerous, in a dense rosette, erect-incurved, lanceolate-ensiform, distinctly attenuated, terminating in a sharp thorn, 45–60 cm. long, and 7·5–11 cm. broad at the base, 15–17 mm. thick, the margins beset with conical reddish-brown thorns 5–6 mm. long and 10–20 mm. apart, somewhat concave above, channelled towards the apex and with a few similar thorns especially in the median line, convex below and more thickly studded with thorns.

Peduncle stout, simple or branched, laterally compressed, clothed with numerous broad deltoid bracts, usually 2–5 branches, arcuate-erect; racemes 30–60 cm. long and about 7 cm. broad, clothed at the base with dry empty scariose bracts, dense, many-flowered, upper part of raceme with unopened buds bright orange-scarlet; bracts maroon-claret brown (R.C.S.), deltoid-acute 11 mm. long, and 7–8 mm. broad; pedicels 3 mm. long.

Perianth 34–38 mm. long, cylindrical-ventricose, lemon-yellow (R.C.S.); outer segments united for 14–16 mm. from the base, linear-lanceolate, with 3 green or orange veins and tipped with brown, inner segments lighter in colour, more obtuse with chestnut-brown tips. *Stamens* and *style* protruding 15–17 mm. beyond the perianth, filaments stout, coloured auburn (R.C.S.); anthers bright orange chrome (R.C.S.), dark brown at the back, style lemon-yellow.

Capsule cylindrical trigonous, 14–18 mm. long and 8–10 mm. diam., greyish; seeds triquetrous, narrowly winged dark, 4 mm. long.

EXPLANATION OF PLATES.

PLATE V.

ALOE LONGIBRACTEATA.

FIG.

1. Two plants in flower showing typical branching of inflorescence.
2. Portion of raceme showing the long bracts.
3. Flowers in different stages of development.
1 & 2 much reduced; 3 natural size.

PLATE VI.

ALOE PIENAARI.

1. Plants flowering near Smit's Drift.
2. Plants in flower showing branching inflorescence, and prominent bracts in the racemes.
3. Inflorescence.
All much reduced.

PLATE VII.

ALOE PIENAARI, *continued*.

1. Flowers at different stages of development.
2. Portion of raceme, showing characteristic appearance of bracts.
1 natural size; 2 slightly reduced.

PLATE VIII.

ALOE WICKENSII.

1. Plants near Chunie's Poort.
2. Plant in flower at M'Phathlele's Location.
Both reduced.

PLATE IX.

ALOE WICKENSII, *continued*.

1. Flowers at different stages of development.
2. Inflorescence, showing typical mode of branching.
1 natural size; 2 much reduced.

PLATE X.

ALOE GLOBULIGEMMA.

1. Plants at M'Phathlele's Location.
2. Inflorescence.
Both much reduced.

PLATE XI.

ALOE GLOBULIGEMMA, continued.

FIG.

1. Portion of raceme showing globular buds.
2. Portion of raceme at later stage of development.
3. Flowers at different stages of development.
1 & 2 slightly reduced; 3 natural size.

PLATE XII.

ALOE PRETORIENSIS.

1. Plants on Meintjes Kop.
2. Plant flowering near Lydenburg.
Both much reduced.

PLATE XIII.

ALOE PRETORIENSIS, continued.

1. Portion of leaf.
2. Flowers at different stages of development.
3. Raceme.
1 slightly reduced; 2 natural size; 3 much reduced.

PLATE XIV.

ALOE ACULEATA.

1. Plants near Smit's Drift.
2. Plant near Meintjes Drift showing typical inflorescence.
3. Plants showing dense racemes and thorny leaves.
All much reduced.

PLATE XV.

ALOE ACULEATA, continued.

- 1 & 2. Flowers at different stages of development.
Both natural size.